

CLAIMS:

1. A furniture system comprising:
a plurality of host structures;
a plurality of cross supports; and
a plurality of devices carried by the cross supports for fastening the cross supports to the host structures, the devices comprising:
a locking body having an engagement member at a distal end present in a slot of the host structure; and
a cam connected to the locking body which allows for securing the engagement member of the locking body in the slot.
2. The furniture system of claim 1, wherein the locking body further comprising:
a ball for connecting the locking body to the cam located at a proximal end of the locking body;
a central shaft between the ball and the engagement member.
3. The furniture system of claim 2, wherein the locking body further comprises a bumper attached to the engagement member.
4. The furniture system of claim 1, wherein each host structure comprises a geometrically configured tube.
5. The furniture system of claim 1, wherein the slot is formed from the surface of the tube, and the slot contains a narrower outer portion and a wider inner

portion, wherein the engagement member is movable within the wider inner portion.

6. The furniture system of claim 1, wherein the edge of the cross support engages the wall of the host structure when the fastening device is secured.

7. The furniture system of claim 1, wherein each cross support comprises a panel with a tongue on at least one side, the tongue being notched for reception of at least one locking body.

8. The furniture system of claim 1, wherein the cam is embedded in the cross support.

9. The furniture system of claim 1, wherein the furniture system is a cabinet for a home entertainment system.

10. An item of furniture comprising:
a plurality of geometrically extruded tubes, each tube containing at least one slot;
a plurality of cross supports; and
a plurality of fasteners contained in the cross supports connecting the geometrically extruded tubes and cross supports, each fastener comprising:
a mechanism for locking the fastener;
a reciprocating locking body; and
an engagement member contained within a slot of the geometrically extruded tube.

11. The item of furniture of claim 10, wherein the mechanism for locking the fastener comprises a cam attached to the reciprocating locking body.

12. The item of furniture of claim 11, wherein the engagement member is vertically movable within the slot when the cam is in a first position, and the engagement member is in a fixed position when the cam is in a second position.

13. The item of furniture of claim 10, wherein all cross supports are vertical panels.

14. A structural assembly for constructing furniture for use in display and home entertainment comprising:

- a plurality of like host structures containing slots defined by surfaces of the host structures;
- a plurality of cross supports containing a plurality of locking mechanisms imbedded in the cross supports to fasten the cross supports to the host structures.

15. The structure assembly of claim 14, wherein the locking mechanisms comprises:

- a reciprocating locking body; and
- a cam attached to the locking body which provides a reciprocating motion of the locking body.

16. The structural assembly of claim 14, wherein the locking body comprises:

an engagement member for securing the locking body to a the slot
of the host structure; and
a ball for connecting the locking body to the cam.

17. An item of furniture constructed with plurality of corner host structures and a plurality of cross supports, each host structure comprising a rectangular geometrically extruded tube that contains a first slot on a first face of the tube and a second slot on a second face of the tube perpendicular to the first face, the item comprising:

- a first host structure;
- a second host structure;
- a third host structure;
- a fourth host structure;
- a front cross support mounted between the first host structure and second host structure;
- a right cross support mounted between the second host structure and third host structure;
- a back cross support mounted between the third host structure and fourth host structure;
- a left cross support mounted between the fourth host structure and first host structure;

wherein the front, right, back, and left cross supports and the first, second, third, and fourth host structures form a free standing rectangular enclosure with an open top and open bottom;
and
wherein the front, right, back, and left cross supports are mounted and the first, second, third, and fourth host structures by fasteners comprising:

a mechanism for locking the fastener;
a reciprocating locking body; and
an engagement member contained within a slot of
the host structure.

18. The item of furniture of claim 17, wherein the front, right, back, and left cross supports comprise rectangular vertical panels.

19. The item of furniture of claim 18, wherein the vertical panels forming the front and back cross supports have similar dimensions.

20. The item of furniture of claim 18 wherein the mechanism for locking the fastener is a cam mounted in the cross support.

21. The item of furniture of claim 20 wherein each vertical panel contains at least four fasteners, with the cam of each of the four fasteners located proximate to a corner of the vertical panel.

22. The item of furniture of claim 17 further comprising:
a top panel mounted to the rectangular enclosure to cover the open top;
a bottom panel mounted to the rectangular enclosure to cover the open bottom.

23. A piece of furniture made from an assembly structure comprising:
a first vertical geometrically extruded tube containing a slot, the slot comprised of a pair of parallel struts extending outward from the outer surface of the tube, and each strut containing

an opposing segments that protrudes perpendicular from the end of the strut toward the center of the slot to define the top of slot;

a second vertical geometrically extruded tube parallel to the first vertical geometrically extruded; the second tube containing a slot, the slot comprised of a pair of parallel struts extending outward from the outer surface of the tube, each strut containing an opposing segments that protrudes perpendicular from the end of the strut toward the center of the slot to define the top of slot; and

a vertical support panel positioned between the first vertical geometrically extruded tube and second vertical geometrically extruded tube;

a first plurality of vertically spaced fasteners along a first edge of the vertical support panel, the fasteners comprising:

a cam contained in the vertical support panel; and

a locking member extending from the vertical support panel into the slot in the first vertical geometrically extruded tube, and having at a distal end an engagement member that is vertically movable in the slot when a cam is in a first position, and that is in a fixed position when the cam is in a second position; and

a second plurality of vertically spaced fasteners along a second edge of the vertical support panel, the fasteners comprising:

a cam contained in the vertical support panel; and

a locking member extending from the vertical support panel into the slot in the second vertical geometrically

extruded tube, and having at a distal end an engagement member that is vertically movable in the slot when a cam is in a first position, and that is in a fixed position when the cam is in a second position.

24. The item of furniture of claim 23, wherein the item of furniture is comprised of two parallel assembly structures.

25. The item of furniture of claim 23, wherein the item of furniture is comprised of two perpendicular assembly structures, wherein the second vertical geometrically extruded tube of a first assembly structure comprises the first vertical geometrically extruded tube of a second assembly structure.